State Maps and Prescriptive Packages

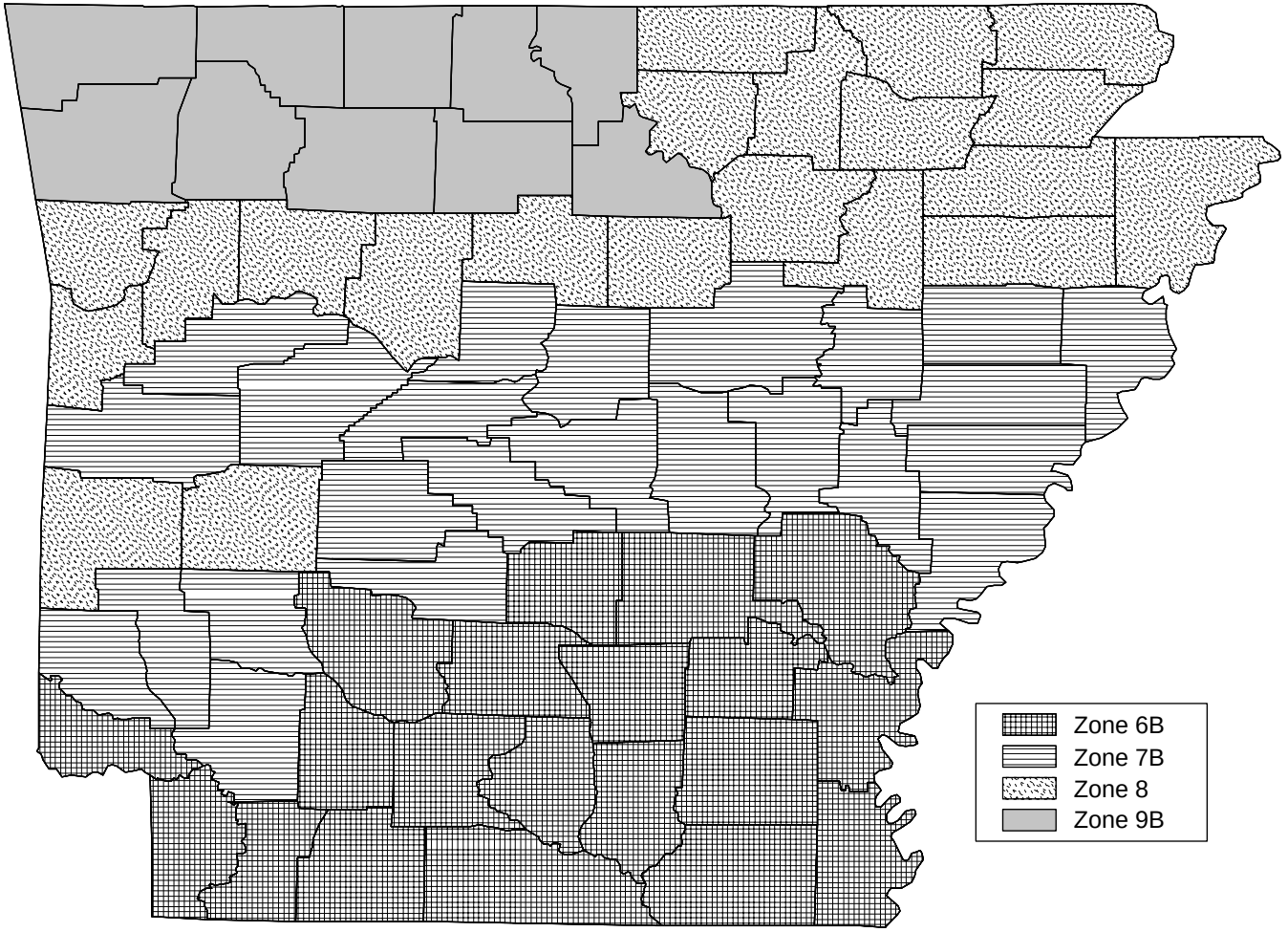
April 2000

The State Maps and Prescriptive Packages contain supporting materials that are needed when using the Envelope and Mechanical Compliance Guides. Insulation and other building envelope requirements and some mechanical system requirements vary by climate. The State Maps divide the United States into 33 different climate zones at a county level. Zones are numbered from 1 through 19 (consistent with the IECC and MEC*check* climate zones) and have a, b, and c designations to reflect climate differences that affect cooling; e.g., cooling degree days and solar radiation. The climate maps are unchanged from Version 1.

To determine the climate zone to use with your building, locate the map for your state and identify the zone number from the legend or county list.

To determine insulation and other building envelope requirements, find the prescriptive package number corresponding to your climate zone. The *Envelope Compliance Guide* employs a package approach that requires all components in your design to meet or exceed the prescribed efficiency levels contained in the prescriptive package. If you find the prescriptive packages too constraining, consider using the COM*check-EZ* software, which allows tradeoffs among building envelope components.

ARKANSAS



Zone	County	Zone	County
6B	Arkansas	7B	Lee
6B	Ashley	6B	Lincoln
9B	Baxter	6B	Little River
9B	Benton	7B	Logan
9B	Boone	7B	Lonoke
6B	Bradley	9B	Madison
6B	Calhoun	9B	Marion
9B	Carroll	6B	Miller
6B	Chicot	8	Mississippi
6B	Clark	7B	Monroe
8	Clay	8	Montgomery
8	Cleburne	6B	Nevada
6B	Cleveland	9B	Newton
6B	Columbia	6B	Ouachita
7B	Conway	7B	Perry
8	Craighead	7B	Phillips
8	Crawford	7B	Pike
7B	Crittenden	8	Poinsett
7B	Cross	8	Polk
6B	Dallas	8	Pope
6B	Desha	7B	Prairie
6B	Drew	7B	Pulaski
7B	Faulkner	8	Randolph
8	Franklin	7B	Saline
8	Fulton	7B	Scott
7B	Garland	9B	Searcy
6B	Grant	8	Sebastian
8	Greene	7B	Sevier
7B	Hempstead	8	Sharp
7B	Hot Spring	7B	St Francis
7B	Howard	9B	Stone
8	Independence	6B	Union
8	Izard	8	Van Buren
8	Jackson	9B	Washington
6B	Jefferson	7B	White
8	Johnson	7B	Woodruff
6B	Lafayette	7B	Yell
8	Lawrence		

COMcheck-EZ™ Prescriptive Packages Climate Zone 6b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed Any Spacing — *Minimum R-Value*	NA	11	11	NA	11	11	NA	11	11	NA	11	11
CMU, 8 in. or greater with Integral Insulation(b) — *Minimum R-Value*	0	0	0	0	0	0	0	0	0	0	0	0
All Other Masonry Walls(c) — *Minimum R-Value*	0	0	0	5	11	11	5	11	11	5	11	11
Windows	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.6	0.7	Any	0.5	0.6	0.7	0.4	0.5	0.7
Maximum U-Factor	Any	Any	Any	Any	Any	Any	0.7	0.7	0.7	0.7	0.7	0.7
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor		1			1			1			1	
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss — *Minimum R-Value*	16		19	16		19	19		25	19		25
Nonwood Joist/Truss — *Minimum R-Value*	17		25	17		25	20		25	20		25
Concrete Slab or Deck — *Minimum R-Value*	16		NA	16		NA	19		NA	19		NA
Metal Purlin with Thermal Break — *Minimum R-Value*	17		25	17		25	20		30	20		30
Metal Purlin without Thermal Break — *Minimum R-Value*	17		X	17		X	20		X	20		38
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss — *Minimum R-Value*	6		11	6		11	6		11	6		11
Nonwood Joist/Truss — *Minimum R-Value*	6		11	6		11	6		11	6		11
Concrete Slab or Deck — *Minimum R-Value*	6		NA	6		NA	6		NA	6		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			0			0			0		

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material.

(c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages Climate Zone 7b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a,b)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed *Minimum Cavity R-Value (c)*	NA	11	11	NA	11	11	NA	13	13	NA	13	13
Any Spacing *Minimum Continuous R-Value (d)*	NA	0	0	NA	0	0	NA	0	0	NA	3	0
CMU, 8 in. or greater *Minimum Cavity R-Value*	NA	0	0	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) *Minimum Continuous R-Value*	0	0	0	5	0	0	5	0	0	5	0	0
All Other *Minimum Cavity R-Value*	NA	11	11	NA	11	11	NA	13	11	NA	13	11
Masonry Walls(f) *Minimum Continuous R-Value*	5	0	0	5	0	0	6	0	0	6	0	0
Windows	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
Maximum U-Factor	Any	Any	Any	0.7	0.7	0.7	0.7(g)	0.7(g)	0.7(g)	0.7	0.7	0.7
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor		0.8			0.8			0.8			0.8	
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	14		19	19		25	19		25	19		25
Nonwood Joist/Truss *Minimum R-Value*	15		19	20		25	20		25	20		25
Concrete Slab or Deck *Minimum R-Value*	14		NA	19		NA	19		NA	19		NA
Metal Purlin with Thermal Break *Minimum R-Value*	15		25	20		30	20		30	20		30
Metal Purlin without Thermal Break *Minimum R-Value*	15		X	20		X	20		X	20		38
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	7		11	7		11	7		11	7		11
Nonwood Joist/Truss *Minimum R-Value*	8		11	8		11	8		11	8		11
Concrete Slab or Deck *Minimum R-Value*	8		NA	8		NA	8		NA	8		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			0			0			0		

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Where values are shown for both cavity and continuous insulation, both requirements must be met.

(c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.

(d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.

(e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

(f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

(g) For buildings over 3 stories in height, the maximum U-factor shall be 0.60.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages Climate Zone 8

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed Any Spacing — *Minimum R-Value*	NA	11	11	NA	13	11	NA	13	11	NA	13	11
CMU, 8 in. or greater with Integral Insulation(b) — *Minimum R-Value*	5	11	11	5	11	11	5	11	11	5	11	11
All Other Masonry Walls(c) — *Minimum R-Value*	5	11	11	6	13	11	6	13	11	6	13	11
Windows	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
Maximum U-Factor	Any	Any	Any	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor		0.8			0.8			0.8			0.8	
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss — *Minimum R-Value*	14		19	19		25	19		25	19		25
Nonwood Joist/Truss — *Minimum R-Value*	15		19	20		25	20		25	20		25
Concrete Slab or Deck — *Minimum R-Value*	14		NA	19		NA	19		NA	19		NA
Metal Purlin with Thermal Break — *Minimum R-Value*	15		25	20		30	20		30	20		30
Metal Purlin without Thermal Break — *Minimum R-Value*	15		X	20		X	20		X	20		38
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss — *Minimum R-Value*	9		11	9		11	9		11	9		11
Nonwood Joist/Truss — *Minimum R-Value*	10		11	10		11	10		11	10		11
Concrete Slab or Deck — *Minimum R-Value*	9		NA	9		NA	9		NA	9		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			0			0			0		

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

(c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages Climate Zone 9b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a,b)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed *Minimum Cavity R-Value (c)*	NA	11	11	NA	11	11	NA	13	11	NA	13	13
Any Spacing *Minimum Continuous R-Value (d)*	NA	0	0	NA	0	0	NA	0	0	NA	5	3
CMU, 8 in. or greater *Minimum Cavity R-Value*	NA	11	11	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) *Minimum Continuous R-Value*	5	0	0	5	0	0	5	0	0	5	0	0
All Other *Minimum Cavity R-Value*	NA	11	11	NA	11	11	NA	13	11	NA	13	11
Masonry Walls(f) *Minimum Continuous R-Value*	5	0	0	5	0	0	6	0	0	6	0	0
Windows	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection	No Projection	³.25 Projection	³.5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
Maximum U-Factor	Any	Any	Any	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor		0.8			0.8			0.8			0.8	
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	15		19	19		25	19		25	19		25
Nonwood Joist/Truss *Minimum R-Value*	16		19	20		25	20		25	20		25
Concrete Slab or Deck *Minimum R-Value*	15		NA	19		NA	19		NA	19		NA
Metal Purlin with Thermal Break *Minimum R-Value*	16		25	20		30	20		30	20		30
Metal Purlin without Thermal Break *Minimum R-Value*	16		X	20		X	20		X	20		38
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss *Minimum R-Value*	11		13	11		13	11		13	11		13
Nonwood Joist/Truss *Minimum R-Value*	12		13	12		13	12		13	12		13
Concrete Slab or Deck *Minimum R-Value*	12		NA	12		NA	12		NA	12		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			0			0			0		

Notes:

(a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.

(b) Where values are shown for both cavity and continuous insulation, both requirements must be met.

(c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.

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(f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

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- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.